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EXAMINER
KRUER, KEVIN R

ART UNIT	PAPER NUMBER
1773	

DATE MAILED: 05/21/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

T.P -5

Office Action Summary	Applicati n No.	Applicant(s)	
	09/720,932	BEAMER, BRENT	
	Examiner	Art Unit	
	Kevin R Kruer	1773	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for R ply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) 1-29 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) 1-29 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Objections

Claim 13 is objected to because of the following informalities: the phrase "to" should be deleted from line 2. Appropriate correction is required.

Claim 14 is objected to because of the following informalities: line 9 of the claim comprises an incomplete sentence ending with "the." Appropriate correction is required.

Claim 16 is objected to because of the following informalities: the phrase "to adhesive" in line 2 is idiomatic English. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2 recites the limitation "the tie layer" in line 1 of the claim. There is insufficient antecedent basis for this limitation in the claim. Specifically, it is not clear if "the tie layer" refers to the "first tie layer," "the second tie layer," or both.

Claim 3 recites the limitation "the tie layer" in line 2 of the claim. There is insufficient antecedent basis for this limitation in the claim. Specifically, it is not clear if "the tie layer" refers to the "first tie layer" or "the second tie layer."

Claim 8 recites the limitation "the metallized surface" in line 1 of the claim. There is insufficient antecedent basis for this limitation in the claim. Specifically, it is not clear

if "the metallized surface" refers to the metallized layer of the first polymeric moisture barrier, the metallized layer of the second polymeric moisture barrier, or both.

Claim 9 recites the limitation "the metallized surface" in line 1 of the claim. There is insufficient antecedent basis for this limitation in the claim. Specifically, it is not clear if "the metallized surface" refers to the metallized layer of the first polymeric moisture barrier, the metallized layer of the second polymeric moisture barrier, or both.

Claim 10 recites the limitation "the metallized surface" in line 1 of the claim. There is insufficient antecedent basis for this limitation in the claim. Specifically, it is not clear if "the metallized surface" refers to the metallized layer of the first polymeric moisture barrier, the metallized layer of the second polymeric moisture barrier, or both.

The claims also recite "a first metallized surface" and "a second nonmetallized surface." It is unclear whether the claims are trying to differentiate between a first surface that is metallized and a second surface that is nonmetallized, or whether the claimed polymeric moisture barrier comprises more than one metallized surface and more than one nonmetallized surface.

Furthermore, the phrase "low charge retaining coating" is indefinite because the original disclosure does not provide one of ordinary skill in the art any guidance in how to determine when a composition is considered "low charge retaining." For the purposes of examination, any coating will be considered to meet the "low charge retaining coating" limitation.

Claims 14-22 are held to be indefinite because the phrase "dimensionally stable" is not defined in the specification in such a way that one of ordinary skill in the art could clearly determine the metes and bounds of the present claims.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Golike et al. (US 5,091,299). Golike teaches a package prepared from a flexible static charge-dissipating structure comprising a substrate film, a coating layer of heat sealable thermoplastic matrix containing silica surface-coated with antimony-containing tin oxide, and a thin metal layer (abstract). The heat sealable layer has a surface resistivity of at least 10^5 ohms/square but less than 10^{12} ohms/square (col 4, line 24). The metal layer can be provided by vacuum deposition or as a foil (col 4, lines 43+). The metal layer additionally supplies the laminate with water, oxygen, and corrosion protection (col 5 lines 4+). Additional benefit is obtained when a second metallized layer is attached to the metal layer (col 5, lines 9+). The outer surface may be coated with a second heat sealable layer containing electrically conductive particles (col 5, line 23). The laminate provides excellent static charge protection to sensitive electronic components (abstract).

With respect to claim 27, the examiner takes the position that the above cited art inherently meets the moisture barrier properties claimed because the cited art teaches the same laminate as that claimed by Applicant.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1-6, 8-10, 27, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mott (US 4,756,414) in view of White (US 4,699,830). Mott teaches a flexible sheet material and useful as a package for electrostatically sensitive components (col 1, lines 5+). The sheet comprises a first flexible heat sealable plastic material with antistatic properties on at least the one major surface thereof laminated to a second flexible plastic material with an electrically conductive material on the one major surface thereof and antistatic properties on the other major surface thereof (abstract). As the electrically conductive material that is on one major surface of the second flexible plastic material, a metal may be deposited using well-known vacuum deposition or sputter techniques (col 2, lines 54+). Preferred metals include aluminum, stainless steel, nickel, copper, and mixtures thereof (col 5, lines 35+). The metal is typically 50-200 Angstroms thick and has a surface resistivity of about 100 ohms/sq. The first and second flexible sheets are joined together utilizing a thermosetting adhesive (col 2, lines 63+). The antistatic properties are provided to the first flexible

heat sealable plastic material by applying to the surface an antistatic material with a conductivity of 10^6 to about 10^{13} ohms/square (col 4, lines 40+).

Mott does not teach that a second moisture barrier layer should be attached to the taught laminate. However, White teaches a laminate material which can be used to form packages of electrically sensitive components. The laminate includes an antistatic layer providing a surface resistivity of 10^8 to about 10^{13} ohms/sq. A first conductive metal layer is adhered to the antistatic layer and provides a surface resistivity of less than about 10^5 ohms/sq. A carrier film layer is adhered to the first conductive metal layer by any suitable means (col 4, line 28) such as adhesion or deposition (col 5, line 19). A second conductive metal layer is adhered to the carrier film layer (abstract). The second conductive metal layer may be adhered, bonded, or deposited onto the carrier sheet using any conventional technique such as vacuum or sputter metallization (col 5, lines 19-21). Preferred metals include aluminum, nickel, cadmium, tin, chromium, lead, copper, zinc, and compounds and mixtures thereof (col 5, lines 44-49). A transparent protective layer is adhered to the second conductive metal layer to protect the metal layer from abrasion and oxidation. The surface resistivity of the combined clear protective layer and second conductive metal layer is between10^4-10^8 ohms/square (abstract). The second conductive layer provides rapid static discharge capability to ground for effectively bleeding any charges introduced to the surface of the structure. The second conductive layer also exhibits or enhances the effect of the Faraday cage of the overall structure of the package (col 5, lines 15-49). Thus, it would have been obvious to one of ordinary skill in the art to apply, by any suitable means such as

adhesion, a carrier film and a second conductive metal layer to the laminate taught in Mott in order to provide rapid static discharge capability to the ground for effective bleeding of any charge introduced on the surface of the structure and to enhance the Faraday cage of the overall package. Furthermore, it would have been obvious to apply protective coat (which reads on applicant's claimed "low charge retaining coating) to the second conductive metal layer to protect the metal layer from abrasion and oxidation.

With respect to claim 5, White does not teach the thickness of the metal layer on the carrier layer should have the claimed thickness. However, White does teach that the thickness of the metal will vary depending upon desired surface resistivity (col 5, line 25). Furthermore, it is known in the art that the laminate's transparency improves as the thickness of the metal layer decreases. White teaches that the layers are selected in order to allow light transmission (col 5, lines 50+). Thus, it would have been obvious to one of ordinary skill in the art to vary the thickness of the metal layer taught in White in order to optimize the film's transparency and surface resistivity.

With respect to claim 27 and 28, the examiner takes the position that the above cited art inherently meets the moisture barrier properties claimed because the cited art teaches the same laminate as that claimed by Applicant. Alternatively, it is known in the art (see US 5,091,229, col 5, lines 4+) that the metal layers of the cited art also provide the laminate with moisture resistance. Furthermore, it is known in the art that water resistance is desirable in the packaging art in order to avoid damage to the packaged good. Thus, it would have been obvious to one of ordinary skill in the art to vary the

thickness of the metal foils and/or deposition layers taught in the cited art in order to provide the laminate with the desired water resistance

2. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mott (US 4,756,414) in view of White (US 4,699,830), as applied to claims 1-6, 8-10, 27, and 28, and further in view of Ohlbach (US 4,293,070). Mott in view of White is relied upon as above. Specifically, White teaches that the protective layer preferably is an acrylic-based coating that controls the resistivity of the outer surface of the package. White does not teach that the resistivity can be controlled by coating carbon onto the acrylic protective layer. However, Ohlbach teaches the coating of a surface with carbon black in order to obtain the desired static resistivity on a surface (see abstract). Thus, it would have been obvious to coat carbon black on the surface of the acrylic protective coating taught in White in order to obtain the desired static resistivity on the outer surface of the package.

3. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mott (US 4,756,414) in view of White (US 4,699,830), as applied to claims 1-6, 8-10, 27, and 28, and further in view of Akao et al. (US 4,906,517). Mott in view of White is relied upon as above. Specifically, White teaches that the protective layer preferably is an acrylic-based coating that controls the resistivity of the outer surface of the package. White does not teach that the resistivity can be controlled by adding carbon to the protective layer. However, Akao teaches that carbon may be added to the protective layer applied over the surface of a metallic film in order to improve a packaging laminate's ability to dissipate static electricity (col 9, lines 8+). Thus, it would have been

obvious to one of ordinary skill in the art to add carbon to the acrylic protective layer taught in White in order to obtain the desired resistivity for the outer surface of the package.

4. Claims 1 and 23-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over White (US 4,699,830) in view of Dahringer et al. (US 5,689,878). White teaches a laminate material which can be used to form packages of electrically sensitive components. The laminate includes an antistatic layer providing a surface resistivity of 10^8 to about 10^{13} ohms/sq. The antistatic layer preferably comprises a polyolefin which has been bulk treated during their compounding step through the addition of an additive that minimizes charge generation (col 4, lines 2+). A first conductive metal layer is adhered to the antistatic layer and provides a surface resistivity of less than about 10^5 ohms/sq. A carrier film layer is adhered to the first conductive metal layer by any suitable means (col 4, line 28) such as adhesion or deposition (col 5, line 19). A second conductive metal layer is adhered to the carrier film layer (abstract). The second conductive metal layer may be adhered, bonded, or deposited onto the carrier sheet using any conventional technique such as vacuum or sputter metallization (col 5, lines 19-21). Preferred metals include aluminum, nickel, cadmium, tin, chromium, lead, copper, zinc, and compounds and mixtures thereof (col 5, lines 44-49). A transparent protective layer is adhered to the second conductive metal layer to protect the metal layer from abrasion and oxidation. The surface resistivity of the combined clear protective layer and second conductive metal layer is between10^4-10^8 ohms/square (abstract). The second conductive layer provides rapid static discharge capability to

ground for effectively bleeding any charges introduced to the surface of the structure. The second conductive layer also exhibits or enhances the effect of the Faraday cage of the overall structure of the package (col 5, lines 15-49).

White does not teach that the second conductive metal layer should comprise a metal foil. However, Dahringer teaches an assembly for protecting the active electronic components of an electronic product from environment and electromagnetic interference (abstract). The assembly includes multiple layers of polymeric material that provide diffusion barrier properties, and a metallic layer that provides diffusion barrier properties and EMI shielding properties (abstract). To provide the laminate with the desired diffusion barriers, the metallic layer is preferably a laminated foil (col 5, lines 59-56). Thus, it would have been obvious to one of ordinary skill in the art to utilize a foil as the second conductive metal layer of the laminate taught by White in order to improve the package's diffusion barrier properties.

With respect to claim 25, White does not teach the thickness of the metal layer on the carrier layer should have the claimed thickness. However, White does teach that the thickness of the metal will vary depending upon desired surface resistivity (col 4, line 40). Furthermore, it is known in the art that the laminate's transparency improves as the thickness of the metal layer decreases. White teaches that the layers are selected in order to allow light transmission (col 5, lines 50+). Thus, it would have been obvious to one of ordinary skill in the art to vary the thickness of the metal layer taught in White in order to optimize the film's transparency and surface resistivity.

With respect to claims 26 and 27, The examiner takes the position that the above cited art inherently meets the moisture barrier properties claimed because the cited art teaches the same laminate as that claimed by Applicant. Alternatively, it is known in the art (see US 5,091,229, col 5, lines 4+) that the metal layers of the cited art also provide the laminate with moisture resistance. Furthermore, it is known in the art that water resistance is desirable in the packaging art in order to avoid damage to the packaged good. Thus, it would have been obvious to one of ordinary skill in the art to vary the thickness of the metal foils and/or deposition layers taught in the cited art in order to provide the laminate with the desired water resistance

5. Claims 1, 14-18, 22, 27, and 29, are rejected under 35 U.S.C. 103(a) as being unpatentable over Havens (US 5,180,615) in view of White (US 4,699,830) and Dahringer et al. (US 5,689,878). Havens teaches a flexible sheet material for packaging electrostatically sensitive items. The sheet has a metal layer and an antistatic layer (abstract). The antistatic layer comprises a resistivity of no less than about 10^8 ohms/square (col 2, line 39). The laminate optionally has a polymeric insulative layer sandwiched between the metal layer and the antistatic layer (col 3, lines 1+). The metal layer is laminated to the antistatic layer via corona lamination, adhesive lamination, or a combination thereof (col 3, line 39). The metal may comprise aluminum, stainless steel, copper, nickel, and mixtures thereof (col 3, lines 39+) and preferably has a thickness of less than 300 angstroms so that the finished bag is transparent (col 3, lines 42+).

Havens does not teach that the packaging laminate should comprise a second metal conductive layer and a low charge retaining coating. However, White teaches a

laminate material that may be used to form packages for electrically sensitive components. The laminate includes an antistatic layer providing a surface resistivity of 10^8 to about 10^{13} ohms/sq. A first conductive metal layer is adhered to the antistatic layer and provides a surface resistivity of less than about 10^5 ohms/sq. A carrier film layer is adhered to the first conductive metal layer. A second conductive metal layer is adhered to the carrier film layer via depositing, bonding, or adhering (col 5, line 19). A transparent protective layer is adhered to the second conductive metal layer to protect the metal layer from abrasion and oxidation and for maintaining the outer surface resistivity of the combined clear protective layer and second conductive metal layer in the range of 10^4 to about 10^8 ohms per square (abstract). The second conductive layer provides rapid static discharge capability to ground for effectively bleeding any charges introduced to the surface of the structure. The second conductive layer also exhibits or enhances the effect of the Faraday cage of the overall structure of the package (col 5, lines 15-49). Thus, it would have been obvious to one of ordinary skill in the art to apply, by any known means such as adhesion or deposition, a carrier film and a second conductive metal layer to the laminate taught in Havens in order to provide rapid static discharge capability to the ground for effective bleeding of any charge introduced on the surface of the structure and to enhance the Faraday cage of the overall package. Furthermore, it would have been obvious to apply protective coat (which reads on applicant's claimed "low charge retaining coating) to the second conductive metal layer to protect the metal layer from abrasion and oxidation.

Havens also does not teach that the metal layer should comprise a metal foil. However, Dahringer teaches an assembly for protecting the active electronic components of an electronic product from environment and electromagnetic interference (abstract). The assembly includes multiple layers of polymeric material that provide diffusion barrier properties, and a metallic layer that provides diffusion barrier properties and EMI shielding properties (abstract). To provide the laminate with the desired diffusion barriers, the metallic layer is preferably a laminated foil (col 5, lines 59-56). Thus, it would have been obvious to one of ordinary skill in the art to utilize a foil as the metal layer of the laminate taught by Havens in order to improve the package's diffusion barrier properties.

With respect to claim 18, Havens does not teach the claimed thickness of the film. However, the examiner takes the position that it would have been obvious to one of ordinary skill in the art to vary the thickness of the film in order to improve processability, durability, and aesthetics.

With respect to claim 21, White does not teach the thickness of the metal layer on the carrier layer should have the claimed thickness. However, White does teach that the thickness of the metal will vary depending upon desired surface resistivity (col 5, line 25). Furthermore, it is known in the art that the laminate's transparency improves as the thickness of the metal layer decreases. White teaches that the layers are selected in order to allow light transmission (col 5, lines 50+). Thus, it would have been obvious to one of ordinary skill in the art to vary the thickness of the metal layer taught in White in order to optimize the film's transparency and surface resistivity.

6. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Havens (US 5,180,615) in view of White (US 4,699,830) and Dahringer et al. (US 5,689,878), as applied to claims 1,14-18, 22, 27, and 29 above, and further in view of Rayford et al. (US 4,738,882). Havens in view of White and Dahringer is relied upon as above, but does not teach that the dielectric polymer should be biaxially oriented. However, Rayford teaches an antistatic laminated sheet material for the protection of electronic components from electrostatic charges (abstract). The laminate comprises a metal layer and an insulating layer. Rayford teaches that the insulating layer should be biaxially oriented in order to produce a material of high tensile modulus (col 2, lines 62+). Thus, it would have been obvious to one of ordinary skill in the art to biaxially orient the insulating layer taught in Havens in order to improve the tensile modulus of the laminate.

7. Claims 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Havens (US 5,180,615) in view of White (US 4,699,830) and Dahringer et al. (US 5,689,878) and Rayford et al. (US 4,738,882), as applied to claims 1,14-19, 22, 27, and 29 above, and further in view of Mott (US 4,756,414). Havens in view of White, Dahringer, and Rayford is relied upon as above, but does not teach that the carrier film may be polyethylene. However, Mott teaches a package used for forming packages or the like for containing electrostatically sensitive components and protecting them against electrostatic discharge. Mott teaches that the carrier film of a metallized layer may comprise polypropylene or polyethylene (col 4, lines 66+). Thus, it would have been obvious to one of ordinary skill in the art to utilize polyethylene as the carrier film

taught in White because Mott teaches polyethylene is functionally equivalent to the carrier layers taught in White.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin R Kruer whose telephone number is 703-305-0025. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Thibodeau can be reached on 703-308-2367. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-5408 for regular communications and 703-305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

K R K

KRK
May 17, 2002

Paul Thibodeau
Supervisory Patent Examiner
Technology Center 1700